

CLAIMS

Sub B-7
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1. A digital data recording/reproduction method for recording and reproducing digital data in units of clusters, each cluster being the smallest unit of data recording on a disk recording medium, said method comprising:

first step of constructing a file structure in which recordable clusters are connected, on the disk recording medium;

second step of recording digital data from the head of the recordable clusters; and

third step of constituting, as a recorded file, the digital data from a recording head cluster to a recording end cluster.

2. A digital data recording/reproduction method as defined in Claim 1, further comprising the steps of:

when an abend occurs during data recording in the second step, detecting the abend of data recording after recovery from the abend; and

constituting, as a recorded file, the digital data which has been recorded from the start of data recording to the abend, on the basis of format information of the digital data.

3. A digital data recording/reproduction method as defined in Claim 2, wherein the format information of the digital data is a sync byte of a transport packet.

4. A digital data recording/reproduction method as defined in Claim 2, wherein the format information of the digital data is time information.

5. A digital data recording/reproduction method for recording and reproducing digital data in units of clusters, each cluster being the smallest unit of data recording on a digital recording medium, comprising the steps of:

recording digital data in the clusters, with a file identifier and cluster connection information being added to the digital data;

when an abend occurs during data recording, detecting the abend of data recording after recovery from the abend; and

restoring the cluster connection information on the basis of the file identifier and the cluster connection information which are recorded in the clusters.

6. A digital data recording/reproduction apparatus comprising:
a disk recording medium in which digital data is stored in units of clusters, each cluster being the smallest unit of data recording; and

a file structure management unit for storing the digital data in the disk recording medium or reading the digital data from the disk recording medium;

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wherein said disk recording medium has a file structure in which all of clusters are connected in advance.

7. A digital data recording/reproduction apparatus as defined in Claim 6, wherein said file structure management unit has a file recovery unit, and when an abend occurs during recording of digital data, the file recovery unit constitutes, as recorded data, the digital data which has been recorded from the start of data recording to the abend, on the basis of format information of the digital data, after recovery from the abend.

8. A digital data recording/reproduction apparatus as defined in Claim 7, wherein said format information is a sync byte of a transport packet.

9. A digital data recording/reproduction apparatus as defined in Claim 7, wherein said format information is time information.

10. A digital data recording/reproduction apparatus comprising:
a disk recording medium in which digital data is stored in units of clusters, each cluster being the smallest unit of data recording; and

a file structure management unit for storing digital data in the clusters of the disk recording medium, with a file identifier and cluster connection information being added to the clusters,

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or reading the digital data from the disk recording medium;

wherein said file structure management unit has a file recovery unit, and when an abend occurs during recording of digital data, the file recovery unit constitutes, as recorded data, the digital data which has been recorded from the start of data recording to the abend, on the basis of the file identifier and the cluster connection information which are recorded in the clusters, after recovery from the abend.

11. A digital data recording/reproduction apparatus as defined in ~~any of Claims 7 to 10,~~ ^{claim} further comprising:

a digital broadcast receiver for receiving a digital broadcast; and

a controller for controlling the file structure management unit, according to accounting information which indicates whether the received digital broadcast is a fee-charged one or not;

wherein, when an abend of data recording occurs during reception of a fee-charged digital broadcast, the controller discards the recorded data after recovery from the abend so that accounting is not performed on the digital broadcast. ^{power failure}

12. A digital data recording/reproduction apparatus for recording and reproducing digital data, comprising:

a plurality of disk storage units in which digital data are recorded; and

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a file structure management unit for recording a cluster in which digital data is stored and a file allocation table for managing information about connection of the cluster, in different disk storage units.

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